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Please add new claims 60-83 as follows:

60. (New) A composition that effects recombination in mammalian cells comprising:

- (i) an isolated and purified FLP recombinase, or an isolated and purified nucleotide sequence encoding same, and
- (ii) a first DNA comprising a nucleotide sequence containing a first FLP recombination target site (FRT) therein,

wherein the genome of the mammalian cells contains a stably integrated second FRT site, and wherein said FLP recombinase catalyzes recombination between said first FRT and the second FRT, thereby precisely targeting integration of said first DNA into the genome.

61. (New) A composition according to Claim 60, wherein said first DNA comprises at least a first segment of a first gene of interest, said composition further comprising:

- (iii) a second DNA comprising:
 - (a) at least a second segment of said first gene of interest, or
 - (b) at least a segment of a second gene of interest;

wherein said second DNA contains at least one FLP recombination target site; and wherein said second DNA, when combined in reading frame with said first DNA, provides a functional gene.

62. (New) A composition according to Claim 61 wherein said second DNA comprises said second segment of said first gene of interest.

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4 63. (New) A composition according to Claim 61 wherein said second DNA comprises said segment of said second gene of interest.

5 64. (New) A composition according to Claim 63 wherein said segment of said second gene of interest, when combined in reading frame with said first DNA, provides a hybrid, functional gene.

6 65. (New) A composition according to Claim 63 wherein said segment of said second gene of interest, when combined with said first DNA, disrupts the function of said first gene of interest.

7 66. (New) A composition according to Claim 60 wherein said first DNA further comprises a third FRT.

8 67. (New) A composition according to Claim 60 wherein said FLP recombinase is from a species of the genus *Saccharomyces*.

9 68. (New) A composition according to Claim 60 wherein said FLP recombinase is from a strain of *Saccharomyces cerevisiae*.

10 69. (New) A composition according to Claim 68 wherein said FLP recombinase is encoded by the sequence set forth as SEQ ID NO:1.

11 70. (New) A composition according to Claim 60 wherein said first DNA provides a readily analyzable marker upon expression.

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~~71~~¹². (New) A composition according to Claim ~~61~~² wherein said second DNA provides a readily analyzable marker upon expression.

~~72~~¹³. (New) A composition according to Claim ~~60~~¹ wherein said first DNA is an autonomous fragment comprising:

- (a) said first FRT,
- (b) at least one restriction endonuclease recognition site,
- (c) at least one marker gene,
- (d) a bacterial origin of replication, and optionally
- (e) a mammalian cellular or viral origin of DNA replication.

 ~~73~~¹⁴. (New) A DNA construct comprising, as an autonomous fragment, in the following order, reading from 5' to 3' along said fragment:

- (a) a first FLP recombination target site,
- (b) an insert segment comprising:
 - (1) at least one restriction endonuclease recognition site,
 - (2) at least one marker gene,
 - (3) a bacterial origin of replication, and optionally
 - (4) a mammalian cellular or viral origin of DNA replication, and
- (c) a second FLP recombination target site in tandem with said first FLP recombination target site.

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74. (New) A method for the assembly of functional gene(s) for expression in mammalian cells, by recombination of individual inactive gene segments from one or more gene(s) of interest, wherein each of said segments contains at least one FRT, said method comprising:

contacting said individual inactive gene segments with a FLP recombinase, under conditions suitable for recombination to occur, thereby providing upon recombination a DNA which encodes a functional gene of interest, the expression product of which is biologically active.

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75. (New) A method according to Claim ¹⁵74 wherein said FLP recombinase is from a species of the genus *Saccharomyces*.

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76. (New) A method according to Claim ¹⁵74 wherein said FLP recombinase is from a strain of *Saccharomyces cerevisiae*.

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77. (New) A method according to Claim ¹⁷76 wherein said FLP recombinase is encoded by the sequence set forth as SEQ ID NO:1.

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78. (New) An isolated mammalian cell, wherein the genomic DNA of said cell contains an inserted heterologous first DNA comprising at least one FLP recombination target site therein.

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79. (New) An isolated mammalian cell according to Claim ¹⁹78 wherein said first DNA comprises at least a first segment of one or more first gene(s) of interest.

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